

Product Change Notification - RMES-28HUEN707

Date: 05 Apr 2017

Product Category: Linear Regulators

Notification subject: CCB 2882 and CCB 2883 Initial Notice: Qualification of JCET as an additional assembly site for selected products of 135K DLM wafer technology available in 3L SOT-23A package using (CuPdAu) bond wire.

Notification text: **PCN Status:**
Initial notification.

Microchip Parts Affected:

Please open the attachments found in the attachments field below labeled as PCN_#_Affected_CPN.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

Description of Change:

Qualification of JCET as an additional assembly site for selected products of 135K DLM wafer technology available in 3L SOT-23A package using palladium coated copper with gold flash (CuPdAu) bond wire.

Pre Change:

Assembled at HANA and LPI using gold (Au) bond wire and G600 molding compound material.

Post Change:

Assembled at HANA and LPI using gold (Au) bond wire and G600 molding compound material or
Assembled at JCET using palladium coated copper with gold flash (CuPdAu) bond wire and GE-1030S or EMG 600-2 molding compound material.

Pre and Post Change Summary:

	Pre Change		Post Change		
Assembly Site	HANA	LPI	HANA	LPI	JCET
Wire material	Au wire	Au wire	Au wire	Au wire	CuPdAu wire
Die attach material	8006NS	84-3J	8006NS	84-3J	8006NS
Molding compound material	G600	G600	G600	G600	*GE-1030S or EMG 600-2
Lead frame material	A194	EFTEC64T	A194	EFTEC64T	A194

*Note: Microchip will run qualify using both mold compound materials but after qualification will select the mold compound that performs the best and only use one mold compound. The final PCN will identify the mold compound that will be used.

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve productivity by qualifying palladium coated copper with gold flash (CuPdAu) bond wire at JCET assembly site.

Change Implementation Status:

In Progress

Estimated Qualification Completion Date:

June 2017

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and a final PCN has been issued. The final PCN will include the qualification report and estimated first ship date. Also note that after the estimated first ship date guided in the final PCN customers may receive pre and post change parts.

Time Table Summary:

	April 2017					-->	June 2017				
Workweek	14	15	16	17	18		22	23	24	25	26
Initial PCN Issue Date	X										
Qual Report Availability											X
Final PCN Issue Date											X

Method to Identify Change:

Traceability code

Qualification Plan:

Please open the attachments included with this PCN labeled as PCN_#_Qual Plan.

Revision History:

April 04, 2017: Issued initial notification.

April 05, 2017: Corrected typographical error on the revision history from March to April.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachment(s):

[PCN_RMES-28HUEN707_Affected_CPN.pdf](#)

[PCN_RMES-28HUEN707_Qual Plan.pdf](#)

[PCN_RMES-28HUEN707_Affected_CPN.xlsx](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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Affected Catalog Part Numbers (CPN)

PCN_RMES-28HUEN707
CATALOG PART_NBR
MCP1702T-1202E/CB
MCP1702T-1502E/CB
MCP1702T-1802E/CB
MCP1702T-2102E/CB
MCP1702T-2202E/CB
MCP1702T-2302E/CB
MCP1702T-2502E/CB
MCP1702T-2702E/CB
MCP1702T-2802E/CB
MCP1702T-3002E/CB
MCP1702T-3302E/CB
MCP1702T-3602E/CB
MCP1702T-4002E/CB
MCP1702T-4101E/CB
MCP1702T-4502E/CB
MCP1702T-4702E/CB
MCP1702T-5002E/CB
MCP1702T-5102E/CB
MCP1703AT-1202E/CB
MCP1703AT-1502E/CB
MCP1703AT-1802E/CB
MCP1703AT-2052E/CB
MCP1703AT-2502E/CB
MCP1703AT-2802E/CB
MCP1703AT-3002E/CB
MCP1703AT-3152E/CB
MCP1703AT-3302E/CB
MCP1703AT-3302E/CBAAC
MCP1703AT-3502E/CB
MCP1703AT-4002E/CB
MCP1703AT-5001E/CB
MCP1703AT-5001E/CBAAA
MCP1703AT-5002E/CB
MCP1703T-1202E/CB
MCP1703T-1502E/CB
MCP1703T-1802E/CB
MCP1703T-2402E/CB
MCP1703T-2502E/CB
MCP1703T-2802E/CB
MCP1703T-3002E/CB
MCP1703T-3301E/CB
MCP1703T-3302E/CB

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Affected Catalog Part Numbers (CPN)

PCN_RMES-28HUEN707
CATALOG_PART_NBR
MCP1703T-3502E/CB
MCP1703T-3602E/CB
MCP1703T-4002E/CB
MCP1703T-4502E/CB
MCP1703T-5001E/CB
MCP1703T-5002E/CB
MCP1703T-5002E/CBHAZ



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QUALIFICATION PLAN SUMMARY

PCN #: RMES-28HUEN707

**Date:
March 14, 2017**

**Qualification of JCET as an additional assembly site for
selected products of 135K DLM wafer technology available in
3L SOT-23A package using palladium coated copper with gold
flash (CuPdAu) bond wire.**

Purpose: _____ Qualification of JCET as an additional assembly site for selected products of 135K DLM wafer technology available in 3L SOT-23A package using palladium coated copper with gold flash (CuPdAu) bond wire.

CCB No.: _____ 2882 and 2883

MP code: _____ HBAF1YM7XA33

Part No.: _____ MCP1703AT-3302E/CB

BD No: _____ BDM -001303 Rev.A / BDM -001304 Rev.A

Package:

Type _____ 3L SOT-23A

Die size: _____ 46.5 x 41.5 mils

MSL: _____ MSL1

Lead frame:

Paddle size: _____ 51x72 mils

Material _____ A194

Plating _____ Spot Ag

Surface Treatment _____ None

Process _____ Stamped

Leadlock _____ No

Part Number _____ 111012500016C2-141 (12R)

Wire:

Material _____ CuPdAu

Die Attach Epoxy:

Part Number _____ 8006NS (screen print)

Conductive _____ Non-conductive

Mold Compound:

Part Number _____ GE-1030S and EMG-600-2

Lead finish: _____ Matte Tin

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Special Instructions
Standard Pb-free Solderability	JESD22B-102E; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Standard Pb-free: Matte tin/ NiPdAu finish, SAC solder, wetting temp 245 °C for both SMD & through hole packages.	22	5	1	27	> 95% lead coverage	5	Standard Pb-free solderability is the requirement. SnPb solderability (backward solderability- SMD reflow soldering) is required for any plating related changes and highly recommended for other package BOM changes.
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	3	24	0 fails after TC	5	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	3	24		5	30 bonds from a minimum of 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	
HTSL (High Temp Storage Life)	+175 C for 504 hours or 150°C for 1008 hrs. Electrical test pre and post stress at +25°C	45	5	1	50	0	10	Must be in progress at time of package release to production, but completion is not required for release to production.
Preconditioning - Required for surface mount devices	+150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020D for package type; Electrical test pre and post stress at +25°C. MSL1 @ 260°C	231	15	3	738	0	15	Spares should be properly identified. 77 parts from each lot to be used for HAST, Autoclave, Temp Cycle test.

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Special Instructions
HAST	+130°C/85% RH for 96 hours/192hrs Electrical test pre and post stress at +25°C	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre- conditioning.
Unbiased HAST	+130°C/85% RH for 96 hrs/192hrs Electrical test pre and post stress at +25°C	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre- conditioning.
Temp Cycle	-65°C to +150°C for 500 cycles /1000cycles. Electrical test pre and post stress at 25C 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre- conditioning.